

PREPARED BY
Coral Voss

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Yukon Conservation Society

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Cover Photo: Yukon Conservation Society offices, C Voss, 2020



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President's Report 2020

2020 was a busy year for the board.

Early on, a committee composed of Ciaran Connolly, Walter Streit, Joan Norberg, and Jared Gonet led the hiring process to find Coral Voss, our excellent new Executive Director (ED). Ciaran Connolly was instrumental in this process, as was Walter Streit. During the transition from one ED to the next Lewis Rifkind and Debborah Donnelly shared the ED role, representing the YCS admirably.

Throughout the year the Board passed new policies: a governance policy based off training the board participated in, and a diversity/equity/inclusion (DEI) policy to help build DEI into all our work and practices.

The Board crafted a mandate letter for Coral Voss to help identify several gaps within the organization, notably a firm strategic plan, staff compensation structures, and several other internal goals.

Other work of note:

- o Directing the creation of a 'Helmut Grunberg Conservation Intern' in memory and honor of a sizable donation from Helmut to the YCS.
- o Taking part in two full Sundays of strategic planning.
- o Helping draft and approve a Grizzly Bear position paper.
- Beginning the bylaw revision process to fall in line with the new Societies Act and modernize the YCS bylaws.
- Began the discussion for how to place a 'Voiceless' board chair within the YCS Board.

Ciaran Connolly who served two years as Secretary is stepping down this year, his dedication was gratefully appreciated by all board members.

A heartfelt thanks to the staff, volunteers, directors, and YCS membership, past and present - who dedicate their time to conservation, who see a vision of a future where several generations from now the Yukon harbours the same species it does today, where those yet to be born inhabit connected and diverse landscapes full of life.

Jared Gonet, 2020 YCS President

Executive Director's Report 2020

2020 was a year of change and challenge for all of us, and we at the Yukon Conservation Society were not immune to these trying times from the loss of long-time members and volunteers to the months of working from home. Yet despite these challenges YCS has flourished with the extraordinary hard work and support of the staff, Board and volunteers.

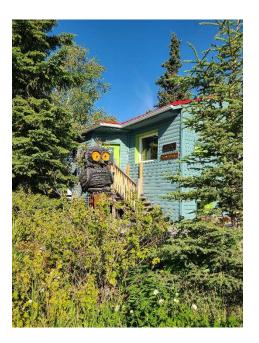
I joined YCS only 6 months ago but having seen first hand the resiliency of my colleagues, YCS as a whole, and Yukon at large. Though I may not be able to speak to the entirety of 2020, I feel privileged to have the opportunity to speak to the body of work that my colleagues and YCS have accomplished this past year. Therefore, these are just some selected highlights of YCS' achievements in 2020.

Late in 2020, YCS began the process of developing a new 5-year strategic plan. We expect that this document will be released early in the Spring 2021. In addition, late in 2020 the foundation was laid for a new website to be constructed during the Spring of 2021.

\Financially YCS remained stable and is in a good position moving forward into 2021. Although, like many others there were some financial losses and redirections. We are strengthened by the continued support of our funders and members.

We had another successful gardening season thanks to the hard work of YCS staff and volunteers. The garden produced a variety of greens and root crops, which were harvested to be shared at the End of Summer BBQ. Although our offices were closed, we still managed the maintenance and any necessary upgrades to our offices including a short flight for Owlivia!

YCS celebrated the 40th anniversary of the Trail Guide program during a festive, COVID appropriate, summer event. In addition, 'Created at the Canyon' was successfully created again despite COVID and its inherent restrictions. YCS was often in the news including numerous print articles and radio interviews with a remarkable social media presence throughout the year.



In addition. YCS took part in two Yukon Water Board (YWB) processes and twenty-eight Yukon Environmental and Socio-economic Assessment Board (YESAB) applications. YCS also acted as a watchdog of the mining industry in the Yukon including the large untreated water discharge

that occurred at the Victoria Gold mine, which released 43,130 m3 of untreated water over nine days. Additionally, YCS participated in the Yukon Mineral Development Strategy panel with a presentation to the panel and the submission of three sets of written comments.

YCS has contributed to the ongoing development of the Yukon Wetlands Policy, including presentations at three public events in Whitehorse, Pelly and Dawson. In addition, comments were submitted on Water Licence applications for two placer mines that posed risks to surrounding wetlands. Furthermore, YCS has been very active in contributing to both the Beaver River Plan and Dawson Regional Land Use Plan including presentations, submissions and promoting public participation.

The Electrical Thermal Storage (ETS) project launched this year with the online registration going live on April 22nd, 2020 – the 50th Earth Day, with the formal financial announcement occurring on September 16th, 2020. This project is supporting YCS' and our partners spear heading the larger conversation surrounding clean energy in the North. As of December 31, there were 13 participants and 3 installations with an expectation that the proposed 40 participants will be registered by June.

I want to again extend my gratitude to the staff, Board, volunteers, supporters and members for an extraordinary year during one of the most difficult years of YCS' and many of our lifetimes.

Coral Voss, Executive Director

Outreach & Communications Report

April through December 2020

Prepared by: Debborah Donnelly

Introduction

The new Outreach and Communications Manager (OCM), Debborah Donnelly, started in April, initially working from home, as the office was closed due to COVID-19 restrictions. Virtual meetings were held with the Executive Director, Mining and Wildlife Analysts, and the Electric Thermal Storage (ETS) Project Manager, to be brought up to speed on the various projects. She immediately delved into the backlog of emails and updating the website, and in May when the Executive Director (ED) resigned, Debborah and the Mining Analyst, Lewis Rifkind, agreed to accept the interim position of co-Executive Directors until a new ED was hired (Coral Voss) effective August 31st.

The OCM was promoted to the Director, Outreach and Communications (DOC) on October 1st, 2020.

The following excerpts are the major projects that the DOC worked on over the past nine months, this report does not include work carried out as the Interim Executive Director.

Trail Guide Program

The Trail Guide program needed re-evaluation in order to consider the impacts of COVID (tourism, social distancing, limited group sizes, etc.) and how YCS might be able to move forward this year despite the challenges. It was decided to reduce the overall number of daily hikes (due to a severe decrease in tourists) and utilize the extra time to create online educational content about the nature and culture of Miles/Kwanlin Canyon. During the summer, the Trail Guides shot and edited video, and we were able to produce seven educational videos that will be accessible year-round on our YouTube channel.

Despite the particularly wet summer and the decline in tourist numbers we still had a successful hiking season. There was a slight uptick in tourists, mostly from British Columbia, after the change to restrictions in the Phase II recovery process (July 1st). We did however have a noticeable increase in the number of local participants in the program this year.

"I was really impressed with how knowledgeable the guides were, also being a first time hiker they made me feel safe and comfortable. I look forward to more hikes with the Yukon Conservation Society. You guys are doing an amazing job." - Whitehorse, YT

We also offered seven Specialty Hikes this summer which included a Bear Awareness hike; Stories of the Gold Rush; Bhangra at the Canyon; a Kid-Friendly Mini-Hike; Plants & The Changing Environment; a Beringia Hike; and an Anniversary Hike at McIntyre Creek.



The DOC would like to acknowledge the great work done by our Trail Guide Coordinator, Galena Roots, and our Trail Guides, Preet Dhillon, Micah Taggart-Cox and Wyatt Risby. We were also very fortunate to have a local high-school student, Annie Li, volunteer to help out with the Trail Guide program this year, so a big thanks to her as well.

Photo: L to R – Preet Dhillon, Wyatt Risby, Galena Roots and Micah Taggart-Cox

Unfortunately, we were not able to participate at the <u>Fireweed Farmers Market</u> this summer as they only received permission to have food and craft vendors, and not for information booths. We do hope that we will be able to return to the market next summer, which is an important part of our outreach program.

2020 BioBlitz

The Trail Guide team took the opportunity to increase their knowledge of local flora and fauna, as well as support a great conservation research initiative by spending the morning of July 10th at the Yukon Wildlife Preserve to take part in the 2020 BioBlitz. They collectively uploaded some 13 photographic observations to iNaturalist as part of the project. Some 20 species of bugs, beetles and spiders were also collected, to be identified at a later date.

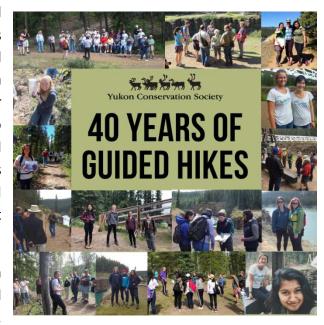


Photo: various flora & fauna at the Yukon Wildlife Preserve

40th Anniversary of the Trail Guide program and End of Summer Barbeque

YCS has been offering free guided hikes in and around the Whitehorse areas since 1980, so as health restrictions started to relax we decided to celebrate this important event by hosting a special hike at McIntyre Creek, and at our annual End of Summer BBQ. We wanted to make the event special for our former Trail Guides by putting together a binder of articles from previous issues of *Walk Softly* and added old photos, etc., and our Trail Guide Preet Dhillon painted the banner for the event.

It was well-attended with representation from our members, volunteers, and several local politicians, funders and other ENGO friends.



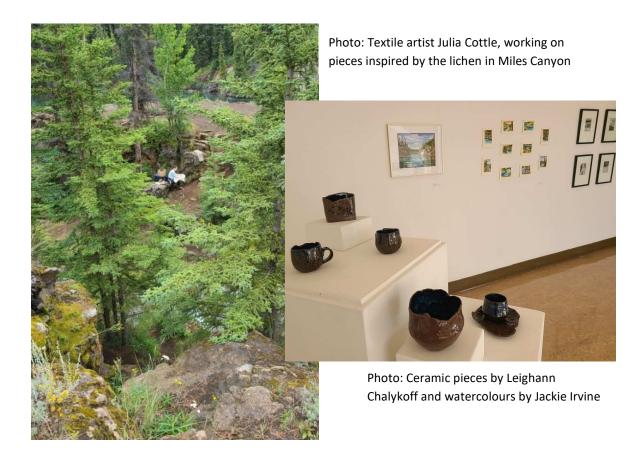
This year's party was a little more challenging in order to ensure health requirements were met, and so we are particularly grateful to the Board of Directors and other volunteers who helped out, to guarantee that we had a safe and happy day.

Created at the Canyon

We had 18 applicants for the 'Created at the Canyon' art-in-nature program this year. With the help of two jurists, local artist Leslie Leong, and <u>Arts Underground</u> Curator Katie Newman, six artists from a diverse variety of artistic backgrounds were selected. This year's featured artists included a ceramicist, a textile artist, a singer/songwriter, a watercolour painter, a print maker and an indigenous performance artist. Special thanks to Leighann Chalykoff, Julia Cottle, Selina Heyligers-Hare, Jackie Irvine, Martha Ritchie and Sean Smith for sharing their time and their art with us.

The finished artworks were displayed at the <u>Yukon Arts Centre</u> from August 20th through September 28th. We hosted an **Exhibit Launch** party on August 19th that was attended by 39 people. Due to the COVID-19 restrictions on being able to serve food and drink, we provided a small 'party favour' of local chocolates donated by the <u>Yukon Chocolate Company</u>, to attendees at the launch.

We also opened the exhibit up for **Culture Days** this year, along with the Yukon Arts Centre's other exhibit by Shuvinai Ashoona: Mapping Worlds.



Government of Canada - Yukon projects announcement - media event

As a recipient of generous funding from Natural Resources Canada (NRCan) for the Electric Thermal Storage (ETS) project, YCS was asked to host the funding announcement for five Yukon clean energy projects by the Canadian Government. MP Larry Bagnell made the announcement on September 16th from the patio of YCS. The DOC planned the event in concert with NRCan and coordinated the invitations of local participants, and media coverage. Attendees included Ministers Ranj Pillai and Pauline Frost, Premier Sandy Silver and Whitehorse Mayor Dan Curtis.

Annual Holiday Open House

Due to restrictions on events to accommodate COVID-19 requirements, the Annual Open House was a mainly outdoor event. We were able to utilize our newly built firepit to roast local wieners or toast marshmallows, as well as keep warm in the -15C temperature. Those who attended seemed to enjoy the opportunity to safely socialize. Presentations were made for the Volunteer of the Year and the Gerry Couture Stewardship Award.



Photo: Left – Initial lighting of the firepit (Luc Garceau and Lewis Rifkind); Right – Coral Voss presenting the certificate, medal and cheque to Norman Barichello for the Gerry Couture Stewardship Award.

Awards

This year's awards were made to the following individuals:

- **Ted Parnell Scholarship** Preet Dhillon (Queen's University Environmental Studies)
- Volunteer of the Year Tanya Handley
- Gerry Couture Stewardship Award Norman Barichello

Information on the recipients were reported in *Tread Lightly* and *Walk Softly*. Reporting on the Gerry Couture Stewardship Award was also picked up by both the *Whitehorse Star* and *Yukon News*.

Partner collaboration

Outreach and Communications partnered with various other NGOs and organisations in the following areas:

- CPAWS Yukon, Ducks Unlimited Canada & Tr'ondëk Hwëch'in Yukon Mineral Development Strategy
- Liard First Nation Indigenous Protected and Conserved Area (IPCA)
- Government of Canada and various Yukon organisations and First Nations Yukon South Beringia Priority Place Initiative (YSB PPI)
- Yukon Energy, Mines & Resources mobile seed library

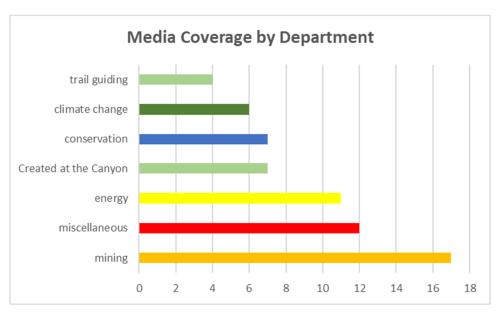
- TREC governance training for the Board of Directors
- Nature Canada engagement organizing
- Yukon Fish & Game Association (YFGA) Photo Contest
- BYTE and Yukon Climate Change Secretariat Youth Panel on Climate Change
- Yukon Environment Climate Risk Assessment

Media and Social Media

YCS has been highlighted in 64 radio interviews and articles (print and online) over the past nine months. The breakdown by outlet is listed in the graph below. CBC provided the most coverage.

Photo: Example of some of the published articles highlighting YCS work over the past nine months.





Social media platforms used are <u>Twitter</u>, <u>Facebook</u>¹, <u>LinkedIn</u>, <u>Instagram</u> and <u>YouTube</u>².

There was an overall increase across all platforms from April through December, with the biggest change on Twitter and Facebook (an increase of over 200 followers on each platform). Twitter has the highest number of followers, ending the year with 2325 followers.



Some of the top tweets from 2020

Publications

Tread Lightly is our bi-weekly e-newsletter.

Following decades of work on the Peel Watershed, YCS is now focusing on a variety of different projects and areas of environmental impacts. The DOC has made a concerted effort to highlight the current work that YCS is undertaking to engage with and inform our membership.

We currently have 987 people subscribed to Tread Lightly.

Walk Softly is the quarterly publication by YCS (both digital and print versions).

Three editions of *Walk Softly* were published over the past 9 months, and covered such topics as:

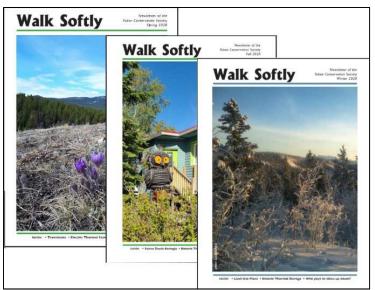
- Type II Mine Cleanups
- How YCS is Fighting Climate Change
- Yukon South Beringia Priority Place Initiative
- YCS's Electric Thermal Storage Project

¹ These are the stats for the Yukon Conservation Society Facebook page, not the YCS Hikes page, which is generally only utilized in the summer months to promote the Trail Guide program.

² We no longer have login access to the older channel. A new YCSYukon YouTube Channel was created this year.

- The Challenges Behind Remediation and Reclamation of Mines
- Fishing Tales are Tall Tales
- Created at the Canyon 2020
- Winter Gardening
- Land Use Planning

Thank you to Tanya Handley who voluntarily does the layout for *Walk Softly*.



Membership & Volunteers

As of December 31, 2020, YCS has 231 active members.

During the period of this report we received requests for and welcomed six new volunteers, who have helped out in a variety of ways, either by contributing articles to *Walk Softly*, or helping out with the Trail Guide program, or other YCS events.

Due to COVID-19 we were not encouraging volunteers to come into the office, but events held outside were considered safe. The number of volunteer hours recorded (not including Board of Directors or Committee meetings, or the hours donated by experts to train our Trail Guides) was 102 hours, which included contacting lapsed members, our Trail Guide assistant, 'Created at the Canyon', garden watering, writing articles, the Exhibit launch, and helping with the BBQ and Open House.

In 2020, the total funding received through donations and memberships came to \$49,757.

Thank You

The DOC would like to thank the following organisations and individuals not already mentioned in this report, for their support, coverage of events and issues, and willingness to collaborate:

<u>Trail Guide Trainers</u>

Heather Ashthorn Bruce Bennett Syd Cannings Patricia Cunning
Alice Cyr Clare Daitch Keith Halliday Ty Heffner
Nyla Klugie-Migwans Lance Leaders Brent Liddle

Maegan McCaw Julia McGoey Katarzyna Nowak Gurdeep Pandher Penny Sheardown Noel Sinclair Sean Smith Leyla Weston

<u>Other</u>

<u>Integraphics</u> <u>Cold Acre</u>

And last, but definitely not least, are the numerous **volunteers** who generously offer their time to support our work!

Mining Report

Prepared by: Lewis Rifkind

YCS is not opposed to mining, as long as it is done in appropriate areas, uses best environmental practices, and has comprehensive and adequately funded closure plans.

YCS has a Mining Analyst (Lewis Rifkind) that focuses mainly on hard-rock (quartz) mining issues, occasionally addressing the impacts of placer mining. Placer mining (especially its impacts on wetlands) is primarily covered by the YCS Wildlife Analyst (Sebastian Jones). As can be imagined, there is much overlap between the two positions when it comes to addressing mining issues.

The following activities occurred during 2020 in regards to mining in the Yukon, and YCS's involvement with them.

Environmental Assessments

The YCS Mining Analyst participated in twenty-eight Yukon Environmental and Socio-economic Assessment Board (YESAB) assessments and two Yukon Water Board (YWB) processes, almost all to do either with quartz exploration projects or hard-rock mine operations.

Abandoned Mines

The Yukon is cursed with the legacy of abandoned mines that either the Yukon or Federal government are cleaning up, funded with taxpayers' dollars. 2020 saw some significant movement in regards to the ongoing reclamation and remediation of these sites. YCS was involved either in participating in the environmental assessment of these projects (through YESAB) or through monitoring the ongoing site activities in a 'watch-dog' role.



- Faro Mine: YCS attended briefing sessions related to the ongoing care and maintenance at the site, the emergency works currently taking place, and has started reviewing the proposed remediation plan on the YESAB website (documents available at https://yesabregistry.ca/projects/39ca43c0-bd52-4dcd-90c7-37d55a305ebd/)
- Mt Nansen Mine: YCS submitted comments to the Yukon Water Board in regards to the Five (5) year Type B Water Licence for the use of water and deposit of waste into:
 - o water as it relates to the ongoing care and maintenance of the Mount Nansen Site. This brings Mt Nansen Mine into the Yukon's water regulatory regime while the remediation plan is developed. Documents available on the Yukon Waterline website at www.yukonwaterboard.ca look for licence QZ19-055.
- Wolverine Mine: YCS continued to watchdog this site as the Yukon Government went to
 court to try and recover funds from the former operator to pay for care, maintenance,
 and remediation. To no-one's surprise this legal action was not successful. The Yukon
 Government is currently treating water on site, and YCS will continue to monitor the
 area.
- Wellgreen Site: This former mine was a rare earth metals mine in the south-west corner
 of the Yukon, situated within the Kluane Wildlife Sanctuary. The original operator closed
 and remediated the site to the standards of the day, but it now appears those standards
 do not meet current expectations so further work is being done on-site. YG Environment



(and not EMR) is doing the work. YCS has comment on the proposed works (documents available online

https://yesabregistry.ca/projects/08a082de-c6f3-4dcd-b7a8-0e0b5c348839/).

New Mines

Despite the legacy of abandoned mines, new mines are still being proposed for the Yukon. YCS was involved in a variety of reviews in regards to these initiatives.

- **Coffee Mine**: YCS submitted comments to YESAB in regards to this large gold mine proposed south of Dawson City. While the mine itself has environmental issues associated with its operation, the proposed access road is also of concern. Documents at https://yesabregistry.ca/projects/00036ef5-c28e-46be-bfc3-4c48808d9c3c
- Kudz Ze Kayah: YCS submitted comments to YESAB in regards to this lead and zinc mine proposed on the Robert Campbell Highway. While the mine itself has environmental issues associated with its operation, the site of it is in the heart of the range of the Finlayson Caribou Herd. YCS has requested that YESAB 'bump' the environmental review of this project to the Panel level. Documents at https://yesabregistry.ca/projects/5942a72b-b77d-403d-83d6-bc2ffffc0c7b/
- **Brewery Creek**: This mine near the south end of the Dempster Highway shut down two decades ago, and received plaudits for a relatively well-done closure and reclamation, but now a new company is attempting to restart it. There had been concern the company was going to use the still valid mining and water licence to do their operation (they were issued 19 years ago, and are valid for another year). However, this is not the case. YCS pushed the regulatory body on this issue, and it has been learnt that the new project will be going through the YESAB and YWB processes.
- Keno Hill: YCS attended the Yukon Water Board public hearing for a water licence renewal for a few sites in the Keno City area. Thanks in part to YCS's intervention the financial security provided by the company to the government was increased.
 Documents available online at www.yukonwaterboard.ca – click on the Waterline button and look for QZ18-044.

Legislative Renewal

Legislation in regards to mining in the Yukon has always been somewhat of an environmental blot on the landscape. It is outdated and does little to nothing to protect the environment. However, the **Yukon Mineral Development Strategy** panel was active in 2020. This panel provides a once-in-a-generation opportunity for a major change in how the Yukon's mining legislation functions, and YCS was an eager participant in the panel's proceedings. YCS presented to the panel, and submitted two sets of written comments. Read about the Strategy and see YCS's input at www.yukonmds.com.



Government's new climate plan 'skirts' mining

Regulations and Guidelines

While Legislation is critical to controlling mining within the Yukon, regulations and guidelines are what govern the day-to-day operations of mines. Having strong regulations and guidelines ensures environmental impacts of current and future mining operations can be reduced.

- Our Clean Future: the YCs mining analyst provided input to and attended a few meetings in regards to YCS's submission to the Yukon Government's Our Clean Future strategy.
 Details at https://yukon.ca/en/our-clean-future.
- Yukon Conservation Society submitted comments to Yukon Environment regarding the South McQuesten River - Water Management Approach
- The Mining Analyst assisted the Wildlife Analyst in regards to the Yukon Water Board Hearing In the Public Interest Regarding Wetlands. Documentation is online at www.yukonwaterboard.ca.
- YCS comments re: Yukon Guide for Developing Water Quality Objectives and Effluent Quality Standards for Quartz Mining Projects

Education

The YCS Mining Analyst is an occasional guest presenter to Yukon University classes. Presentations are made to classes focusing on northern environmental issues.

Watch Dogging

One of the Yukon's two operating mines, the Victoria Gold mine between Mayo and Keno, experienced a large untreated water discharge. YCS publicized the incident so that Yukoners were made aware of how the mining industry currently operates. The amount that was released was 43,130 m3 over nine days, with three of the days having elevated levels of arsenic. Details are available online on the Waterline website (www.yukonwaterboard.ca) under the report tab for Yukon Water Board Licence QZ14-041-1.

Thank You

The YCS Mining Analyst is assisted by a volunteer Mining Committee. It consists of YCS members who have an interest and knowledge of Yukon mining issues. Without their feedback and input YCS would not be able to do the work that it does. YCS would also like to acknowledge the passing of one of the Committee members this year, Gerry Whitley. His work with YCS and his passion for the Yukon's environment will be missed.

Fish, Wildlife and Habitat Report

Prepared by: Sebastian Jones

Sebastian Jones, the YCS Wildlife Analyst is tasked with staying abreast of all matters relating to Fish, Wildlife and Habitat in the Yukon, and with providing the YCS perspective in environmental assessment and permitting processes. The Wildlife Analyst also has the duty of providing public education, through various media and public engagement. If this list seems broad, it is. The Wildlife Analyst assists the Mining analyst in most of their YESAB and Yukon Water Board (YWB) submissions, typically focusing on impacts to fish, wildlife and land use. Assistance is similarly provided to the Energy Analyst, particularly on high impact projects such as hydro dams.

In common with the other Analysts, the Wildlife file was affected by the COVID Pandemic, however it was affected differently. Sebastian works from his home in West Dawson, so the office closures and restriction increased his engagement with his co-workers as more collaboration went on-line. Similarly, many fish, wildlife and land use meetings and events that would typically have meant travel to attend, became more accessible through various platforms such as Zoom, Jitsi, WebEx, GoToMeeting etc. However, public outreach in the form of community visits and presentations were mostly cancelled.

The Wildlife Analyst position is a permanent but part-time (20 hours/week) position.

YESAB and **YWB** comments

The Wildlife Analyst contributed to all twenty-eight of the Mining Analyst comments, to a greater or lesser degree, and in addition, independently compiled comments on two placer Water Licence applications where wetlands were affected, and three YESAB proposals.

Wetlands

The Yukon is developing a Wetlands Policy and the Yukon Water Board is working out how to address wetlands disturbance in water licence applications. The Wildlife Analyst put in considerable time on both these files, leading the YCS response and contribution to both processes. YCS also presented on wetlands at three public events, in Dawson, Pelly and Whitehorse. The Whitehorse event was a major public event with multiple speakers, presenters and other activities.

Land Use Planning

There are two major land use planning efforts underway in the Yukon, the **Beaver River Plan** and the **Dawson Regional Land Use Plan**. The Wildlife Analyst is leading the YCS contribution to

both these initiatives, including making presentations, attending meetings and encouraging public participation.

Conservation Plans

Another major planning initiative is the development of an Integrated Conservation Action Plan (ICAP) in a portion of the Dawson planning region called Yukon South Beringia. This federally initiated plan is led by the Canadian Wildlife Service, and YCS is playing a significant role in the plan which is expected to produce a draft in fall 2021. YCS has attended several planning sessions and has submitted a significant project proposal to publicize and 'Tell the Story' of the development of the plan, and the projects taking place as part of it.

In an effort to bring the Yukon's minerals regime into the 21st century, a Yukon Mineral Development Strategy (YMDS) panel held a series of meeting and engagements and consultations. YCS was very active and helped to coordinate response from a group of ENGOs and First Nations. The Wildlife Analyst contributed considerably to the YCS responses.

Fish and Wildlife Plans

Fish and wildlife management, conservation and harvest plans in the Yukon are typically guided by chapter 16 of the Final Agreements (the treaties between the 11 self-governing Yukon First Nations and Canada). This provides for public participation, and the YCS Wildlife Analyst leads the YCS participation in these plans. In 2020, the Wildlife Analyst participated in plans for Moose, Caribou, Wolves, Grizzly Bears and Salmon.

Roads and Access

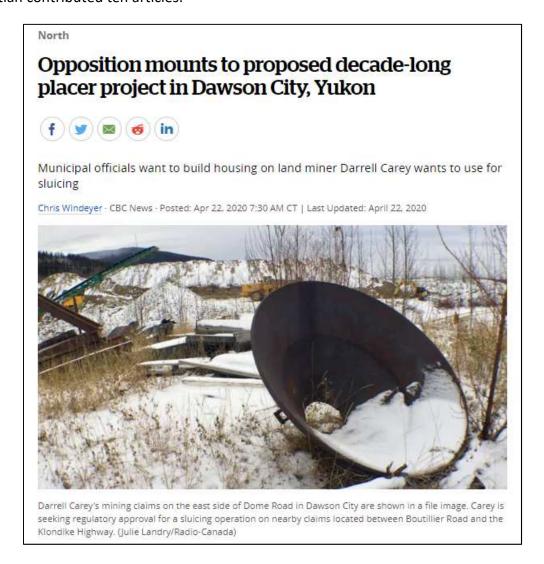
Easily the most significant multipliers of anthropogenic impacts on fish, wildlife and their habitat are the increase in roads, trails and motorized access to the back country. In 2020, YCS contributed to the development of Off-Road Vehicle (ORV) regulations and the Resource Road regulations. The ORV regulations were completed in early 2021, the Resource Road regulations are still fermenting.

In addition, YCS has developed a major initiative around road ecology which included a pair of workshops and a series of presentations that aimed to visit each Yukon community in 2020. Unfortunately, the pandemic has delayed these plans, and only three communities have thus far been visited.

Media

The Wildlife Analyst leverages the work of YCS through the YCS website and social media accounts - with the Director of Outreach and Communications - and through articles published

in local newspapers, YCS publications, and through interviews with journalists. In 2020, Sebastian contributed ten articles.



Working with others

YCS is a small organization that typically wields an outsized influence. Its influence is enhanced through collaboration with First Nations, other ENGOs, UFA mandated bodies and even government departments. While it is difficult to point to tangible markers of success in this category, a very important part of the Wildlife Analyst's work is to establish and foster good relations with these groups. This happens through being perceived as an ally, as being helpful when co-engaging. Reaching out to offer assistance, and to include others in YCS initiatives is also a key strategy.

Yukon Electric Thermal Storage Project

Prepared by: Eric Labrecque

Introduction

Eric joined the Yukon Conservation Society (YCS) as the Project Manager for the Yukon Electric Thermal Storage Project ("the ETS project") on February 13, 2020. The contribution agreement between YCS and Natural Resources Canada's Clean Energy in Rural and Remote Communities (CERRC) program was signed the following week, kicking off the project with \$1.6M in funding. The hiring process for our ETS Project Assistant soon followed, a position held by Noah Sternbergh, whose contributions to the project has been critical for its success to date. Since then we have: publicly launched the project, selected and trained the local contractors, set the participant eligibility and selection process, developed and initialized the project's data collection plans, kick-started installations, sparked interjurisdictional collaboration, and fundraised to support and expand the project's budget. This report will walk through each of those elements of this past year.

Project Start-Up & Launch

The project start-up was facilitated by documents provided by the creators of the project, Cody Reaume and JP Pinard. These documents guided the ETS Project Manager's efforts to establish the initial eligibility criteria for project participants, to select a project development consultant, and engage with the previously identified ETS manufacturers/distributors. We developed the eligibility criteria and other material for the project's content for YCS's website. The online registration form went live at noon on April 22, 2020, the 50th Earth Day. Within the first 24 hours YCS had more than 40 applicants - greater than the number of spots in the project that we had funding for. Registrations have since exceeded 250.

Contractor Selection & Training

With the advice of Summerhill, a public request for quotes (RFQ) process was opened on April 20, 2020. We only received two submissions, from Solvest Inc. (in partnership with Certified Heating) and Milligan's Sheet Metal. Solvest's submission was quite detailed, including a thorough pricing spreadsheet, while Milligan's submission was incomplete. A contract was signed by YCS and Solvest, with Solvest subcontracting furnace/boiler work to Certified Heating, with an end date of March 31, 2022.

Training was arranged for Solvest and Certified Heating with Steffes, the manufacturer of the ETS space heaters, furnaces, and boilers we are using in this project, and Coldbrook Electric Supply, the North American distributor of the project's baseboard-style ETS units. The training

was provided remotely and recorded. Both Steffes and Coldbrook approved the distribution of the recordings to other local contractors upon request.

Participant Eligibility & Selection

The list of participant eligibility criteria varied throughout the year. Considerations included energy efficiency and proximity to Whitehorse. In the end, the key criteria used was whether there is an ETS system that can meet the majority of the home's heat load and keep the occupants warm while charging for less than 12 hours per day, for which there is space in the home and for which any electrical upgrade work necessary for the installation to proceed is feasible and affordable. While most of our applicants have been Whitehorse residents, we have welcomed applicants from as far as Dawson City and Mayo. Additionally, the participant must

Project Partners & Stakeholders

The project has three official project partners, with whom YCS met on a regular basis in 2020. They are: the Yukon Government Energy Branch, Yukon Energy Corporation (YEC), and the Northern Energy Innovation (NEI) research team at Yukon University. The Yukon Government Energy Branch provides guidance based on their decades of experience operating energy projects in Yukon and has granted us access to their existing energy assessment program. The Yukon Energy Corporation advises us on control strategies for peak reduction and other ETS benefits and on our research efforts such that the results are considered actionable by both YEC and the Yukon Utility Board. The Northern Energy Innovation research team is our research partner, a critical role in this pilot project. YCS will be collecting data from the participants, their homes, their ETS unit(s), supplemental and baseline data collection equipment we install, and ETS projects in other jurisdictions for NEI to evaluate and address a set of pre-established research questions.

Two quasi-quarterly project partners' meetings were held, one in the spring and one in the fall, with all project partners. The fall meeting also included YCS contacts on the CERRC team. In addition to the quasi-quarterly project meetings, we meet with the partners individually as appropriate.

Two agreements were signed with our project partners in 2020. The first was with NEI, specifying the details of the \$75,000 in funding provided to them annually by YCS during the ETS project for their research contributions. That relationship has been a mutually beneficial one. In fact, we may be increasing YCS's contribution to NEI for the 2021 fiscal year to expand NEI's capacity to conduct research for the project. That decision will be made in March or April 2021. The second agreement with a project partner in 2020 was with the Yukon Government Energy Branch, creating 7 spots in a combined ETS and cold-climate air-source heat pump (ccASHP) program. Participants in this combined program will typically receive \$10,000 in

additional funding to help cover the costs of a ccASHP installed in tandem with an ETS system, above and beyond the pre-existing funding available for the participants' ETS systems through the ETS project. One such participant has been signed up so far, with their mini-split ccASHP and ETS systems installed in fall 2020.

The ETS project team also created a spin-off research project through our relationships with the project's official project partners. We noticed that the Our Clean Future Plan and 10-Year Renewable Resource Plan released by the Yukon Government and Yukon Energy Corporation, respectively, collectively included generation, transmission, and end-use energy projects but lacked any mention of Yukon's aging electrical distribution infrastructure, which was designed for fossil fuel-based transportation and heating. From early in the ETS project we knew that electrical distribution infrastructure would be a barrier for widespread ETS adoption in Yukon, which contributed to the topic being a high-priority research question. YCS raised the issue with the Yukon Government Energy Branch and Climate Change Secretariat, essentially saying that both plans will fail to meet their objectives if the distribution infrastructure gap is not filled. They acknowledged the importance of looking into the matter and a plan was developed. A study would be conducted to determine which areas of the Yukon Integrated System's distribution infrastructure was in most dire need of upgrades, and precisely what upgrade work is necessary in each area, to allow for the electrification of heating (ETS and ASHP) and transportation (Level 2 chargers at residences) to be aggressively pursued, as outlined in the aforementioned plans. YCS organized and chaired meetings attended by representatives from the Energy Branch, ATCO Electric Yukon, Yukon Energy Corporation, and Yukon University's Northern Energy Innovation research group. A formal research project, separate from but related to the ETS project, was born that would be conducted by NEI, funded by the Energy Branch, and supported by the Yukon Energy Corporation, ATCO Electric Yukon, and YCS. The project is now on-going and will ramp-up in April 2021.

There are at least three organizations that are not official project partners but play a major role in the project nonetheless:

Summerhill: A certified B-Corp that has decades of experience consulting on and
executing energy efficiency and other demand-side management programs and projects
across Canada. Christian Wright has been our primary contact with Summerhill. While
he originally resided in PEI at the start of the project, he has since relocated to
Whitehorse. Christian kindly provided this description of Summerhill's involvement with
the project:

"Summerhill was thrilled to be a part of the YCS ETS project, our second project in Yukon since opening a local office. We value all that we continue to learn about the local challenges and opportunities during our time working on the project. As an energy efficiency service provider known for our best-in-class project management practices, we were able to offer the team at YCS our expertise learned through over 25 years of experience in the fields of energy efficiency and demand response program delivery. Designing and implementing these sorts of programs can be complex, and the proper planning measures ensure that the inevitable bumps along the way are minimized and opportunities for success maximized.

In the earliest days of the ETS project we offered support in the design of the program, weighing in on participant eligibility, strategizing customer outreach and engagement, and building some key performance indicators that would help the team to track their success. As YCS prepared to launch the ETS program, we offered our guidance in the creation of a Gantt chart that would map the steps to project completion along a timeline, and a risk management plan to help prepare for and mitigate potential liabilities. We supported the development of contracts with program partners, and the design of the participant intake process. In short, we helped the YCS Electric Thermal Storage team plan for success, sharing with them the tools that would make executing the program more predictable and trouble-free.

While we continue to consult regularly with the ETS team, we are delighted to see how successfully they have been managing the implementation of this program with their internal resources. We hope it's not the last time Summerhill gets to collaborate with the Yukon Conservation Society - working with an organization staffed by such genuine and passionate people is always a joy!"

- ATCO Electric Yukon: ATCO has been unofficially involved from the outset of the project. They have advised us on the potential impacts of ETS on Yukon's electrical distribution infrastructure, both broadly for research purposes and on an individual home basis for participant selection purposes as mentioned under Participant Eligibility and Selection. Specifically, ATCO has either confirmed that there will be no cost to the homeowner if their ETS installation proceeds which at times necessitates a site visit by ATCO or provides a ballpark cost and description of any work that would be necessary if there is a cost from ATCO to conduct the work necessary for the homeowner's ETS installation to proceed. ATCO has provided this service for over 40 homeowners to date, at no cost to the project.
- **Cygnus Technologies**: Cygnus, led by Charles Hache, has been advising both NEI and YCS on this project since the fall of 2019 regarding data collection strategies and equipment. Charles contributed dozens of hours of his time to the effort with no guaranteed

compensation. He was finally compensated for his time in early 2021 when a number of power monitoring kits were ordered through him and his company.

While we have primarily worked with the project partners and these three companies, in addition to our contractors (Solvest and Certified Heating), we strived to incorporate the viewpoints of other Yukon-based stakeholders in major project decisions. The main example of this is when NEI was seeking to set the priority of each of the 25 predetermined research questions. In coordination with YCS, NEI reached out to dozens of Yukon-based stakeholders. This included community associations, other departments at the Yukon Government, and various other relevant associations. The organizations whose responses were received and considered included YCS (insights were sought from the Energy Committee) and our project partners other than NEI (the Yukon Government Energy Branch and Yukon Energy Corporation) plus the Association of Yukon Communities, ATCO, Yukon Housing Corporation, and the Council for Yukon First Nations.

Several organizations outside of Yukon also supported the project in 2020, as described in Interjurisdictional Collaboration.

Research & Data Collection

The Northern Energy Innovation research team at Yukon University is the project's research partner. Most of NEI's efforts for the project in 2020 were in the planning phase of their research efforts. This included finalizing and prioritizing the project's research questions, which are available upon request. NEI also advised YCS on which data collection equipment we should order, both for baseline and supplemental baseline data collection. Temperature and relative humidity sensors, duct temperature sensors, thermostat signal relays, and power monitoring kits have been ordered to date. Data from this equipment, in addition to sensors built into the ETS units we're installing and surveys we'll develop for our participants to fill out, will be "coded" (any personally identifiable information replaced with a unique ID set by YCS) and provided by YCS to NEI on a regular basis. We will provide the data NEI will need to address the research questions and end up with actionable recommendations for the relevant decision makers in the territory. An effort will also be made to ensure the results and recommendations are relevant for other northern jurisdictions so as to facilitate the adoption of ETS across the Canadian North.

Interjurisdictional Collaboration

As the only ETS project in Canada north of Prince Edward Island, YCS has taken it upon ourselves to ensure that the outcomes from the ETS project are applicable for other northern jurisdictions across Canada. We have also been assisted by numerous southern Canadian jurisdictions in our efforts, forming a pan-Canadian flow of ETS guidance: from southern

jurisdictions who have conducted their own ETS projects to us and the Yukon Electric Thermal Storage Demonstration Project then on to other northern jurisdictions interested in using ETS to contribute to their own pursuit of a clean energy powered, energy independent future.

Each of the Maritime provinces have provided guidance based on their experience with ETS. New Brunswick Power conducted a multi-jurisdictional ETS project called PowerShift Atlantic, which involved hundreds of ETS installations in residential and commercial settings across New Brunswick, Nova Scotia, and the northeastern United States. Summerside, PEI, has provided guidance based on experience from their ongoing 'Heat For Less Now' ETS project. Efficiency Nova Scotia is conducting a pilot project, ironically named the Klondike ETS Pilot Project after the substation that the participants are all served by, and recently introduced a province-wide ETS rebate program. They have and will continue to provide guidance on topics including incentive design, ETS program participant insights and perspectives, and regulation considerations for ETS.

The ETS project has also engaged in interjurisdictional collaboration with an organization interested in pairing residential ETS with rooftop solar to support the energy independence of individual homes in Inuvik, NWT, and an organization interested in using ETS to electrify heating in the southern Nunavut communities involved in a grid-tie project without significantly increasing the maximum electrical demand on the proposed transmission infrastructure that would connect the communities with Manitoba's provincial electrical and fibre infrastructure. These are perfect examples of how the ETS project is contributing to other jurisdictions' efforts to use ETS as a piece of communities' clean energy future.

Media & Social Media

Several media interviews were conducted with the ETS project team in 2020, leading to the following online articles:

- https://thenarwhal.ca/whitehorse-pilot-project-will-cut-reliance-on-fossil-fuels-for-heating/
- https://www.cbc.ca/news/canada/north/feds-fund-biomass-home-heating-yukon
- https://www.cbc.ca/news/canada/north/electric-thermal-units-whitehorse

The "reach" of these articles has been extensive. For example, one applicant mentioned that they heard about the project from a friend in Ottawa who saw The Narwhal's article.

We also fielded several questions about the ETS project at a funding announcement by the federal government that YCS hosted in fall 2020 and conducted multiple interviews for radio, including a live interview in December 2020. A significant portion of our applicants heard about

the project on the radio, highlighting the direct benefits of these radio interviews for the project.



Photo (L to R): Coral Voss, Minister Ranj Pillai, MP Larry Bagnell and Chief Bob Dickson

Funders & Partners

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